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# The Role of Investment Bankers in M&As:

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*DOI:*
10.1016/j.jbankfin.2018.02.004

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*Document Version*
Peer reviewed version

*Citation for published version (Harvard):*
Xing, X, Guo, J, Li, Y & Wang, C 2018, 'The Role of Investment Bankers in M&As: New Evidence on Acquirers' Financial Conditions', *Journal of Banking & Finance*. https://doi.org/10.1016/j.jbankfin.2018.02.004

Link to publication on Research at Birmingham portal

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PII: S0378-4266(18)30034-7
DOI: 10.1016/j.jbankfin.2018.02.004
Reference: JBF 5298

To appear in: *Journal of Banking and Finance*

Received date: 29 September 2015
Revised date: 19 January 2018
Accepted date: 5 February 2018

Please cite this article as: Jie (Michael) Guo , Yichen Li , Changyun Wang , Xiaofei Xing , The Role of Investment Bankers in M&As: New Evidence on Acquirers' Financial Conditions, *Journal of Banking and Finance* (2018), doi: 10.1016/j.jbankfin.2018.02.004

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# The Role of Investment Bankers in M&As: New Evidence on Acquirers' Financial Conditions

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**Abstract**

This paper investigates whether top-tier M&A investment bankers (financial advisors) create value for acquirers with different financial conditions in both the short and long term via analyzing 3420 US deals during 1990–2012. In this paper, deals are divided into three groups based on acquirer financial constraints – acquisitions by constrained, neutral and unconstrained firms. We find that the effects of top-tier bankers are dependent on acquirer financial conditions. Specifically, top-tier advisors improve performance for constrained acquirers rather than neutral, and unconstrained acquirers. Our results show that top-tier investment bankers improve constrained acquirers' short- (5 days) and long-term (36 months) performance by 1.45% and 24.27% respectively, after controlling for firm, deal and market characteristics. For deals with investment banker involvement, constrained acquirers advised by top-tier advisors have the lowest deal completion rate, and pay the lowest bid premiums; while unconstrained acquirers that retain top-tier investment bankers have the highest deal completion rate, and pay relatively high bid premiums. Our findings imply that

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We would like to thank two anonymous referees, as well as participants at the IFABS ASIA 2015 China Conference for valuable comments and suggestions.

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constrained acquirers tend to retain top-tier investment bankers to gain superior synergy, while unconstrained acquirers appear to retain top-tier investment bankers to ensure the deal completion.

***JEL Classification:*** G14; G34.

***Keywords:*** Mergers and acquisitions; Investment Banker; Financial constraint; Firm performance.

# 1. Introduction

In this paper, we investigate whether the effects of investment banker reputation on acquirer performance vary according to acquirer financial conditions. Mergers and acquisitions are one of the most influential investment projects for companies. Majority of acquirers and targets will retain investment bankers as their financial advisors. For acquisitions with advisors' involvement, about 50% of the deals are advised by top-tier investment bankers.[1] The effects of bank reputation on acquirer performance has been highlighted by an increasing number of researchers.

Top-tier investment bankers charge much higher advisory fees and are supposed to provide their clients with superior service (Golubov et al., 2012). However, the empirical evidence on this reputation–quality mechanism remains inconclusive. Some studies find that acquirers advised by top-tier advisors do not outperform those advised by non-top-tier advisors and may even obtain negative abnormal returns (e.g. Hunter and Jagtiani, 2003; Ismail, 2010; Michel et al., 1991; Rau, 2000; Servaes and Zenner, 1996).

For example, Michel et al. (1991) find that Drexel Burnham Lambert, one of the less prestigious banks, helps its clients earn the highest announcement abnormal returns, while First Boston, Bulge Bracket, achieves the poorest performance. In other words, bank reputation does not relate to better takeover performance. Servaes and Zenner (1996) show that acquirer announcement returns do not differ across in-house deals and deals advised by investment banks. The differences in announcement returns between acquirers advised by top-tier and non-top-tier advisors are also insignificant.

[1] Source: Thomson One Banker.

Rau (2000) finds that acquirers advised by top-tier investment banks obtain higher announcement abnormal returns in tender offers but lower announcement abnormal returns in mergers compared to acquirers advised by lower-tier investment banks. Furthermore, in both mergers and tender offers advised by top-tier investment banks, the completion rate of value-increasing transactions measured by announcement cumulative abnormal returns (CARs) is not significantly higher than that of value-decreasing transactions. In contrast, compared to the proportion of tender offers with negative announcement CARs, second-tier banks help acquirers complete a significantly higher proportion of tender offers with positive announcement CARs. Hunter and Jagtiani (2003) use a unique method employing the difference between the transaction values at the announcement date and the effective date as a proxy for acquisition gains, and suggest that acquisition gains are inversely associated with the retention of top-tier investment bankers. Furthermore, Ismail (2010) reports that acquirers advised by first-tier banks obtain negative announcement returns, whereas second-tier banks help their clients gain positive returns around announcements.

In contrast, several researchers argue that top-tier advisors have superior abilities to identify synergistic targets and secure a larger proportion of synergy for their clients. Therefore, top-tier advisors are capable of improving acquirer performance (Golubov et al., 2012). Additionally, a higher reputation is associated with a higher market share. To maintain this market share, top-tier advisors must therefore maintain their reputation, which is achieved by providing superior service.

Specifically, Boone and Mulherin (2008) find that acquirer announcement returns are positively related to top-tier advisors retained by acquirers but negatively related to top-tier advisors retained by targets. Therefore, top-tier advisors help their acquirer clients improve acquisition performance, and help their target clients gain high-premium offers. In other words, the retention of top-tier advisors is in the interest of employers. In addition, Golubov et al. (2012) argue that acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors in public acquisitions. The authors find that the retention of top-tier advisors led to $65.83 million shareholder gains for acquirers, on average, in public acquisitions during 1996–2009. More importantly, their results suggest that the improvement in performance can be

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attributed to top-tier advisors' skills in identifying synergistic targets and negotiating higher shares of synergies for acquirers.

Previous literature examines the effects of investment bankers' reputation on acquirer performance. However, a firm's decisions to conduct acquisitions and to retain top-tier advisors can be influenced by firm characteristics, such as firms' financial conditions. Acquirers with sufficient internal funds are more likely to conduct mergers, while they tend to forgo mergers if they are financially constrained (Jensen, 1986; Harford, 1999). At the same time, cash-rich acquirers are more likely to retain top-tier advisors (Golubov et al., 2012).

Jensen (1986) introduces the free cash flow hypothesis and argues that firms with excess cash reserves tend to make value-decreasing takeover deals. Similarly, Smith and Kim (1994) investigate the influence of free cash flow and financial slack on announcement abnormal returns. Their study shows that acquirers with high free cash flow obtain significantly negative announcement abnormal returns, whereas slack-poor acquirers gain significantly positive announcement abnormal returns. The returns to acquirers are highest in the acquisition of high free cash flow targets by slack-poor acquirers. In addition, Harford (1999) examines whether excess cash holdings stimulate top management to conduct takeover transactions and whether such deals (made by cash-rich acquirers) tend to destroy value. The author finds that cash richness is positively related to the probability of being an acquirer, but negatively related to acquirer announcement returns. Additionally, the post-merger long-term abnormal operating performance of both cash-rich and cash-poor acquirers is significantly negative and insignificant, respectively. In other words, cash-rich companies tend to conduct value-destroying takeovers. Furthermore, Malmendier and Tate (2005, 2008) find that financially unconstrained firms are more likely to exhibit overconfidence and overconfident CEOs tend to conduct value-destroying acquisitions, while firms with financial constraints are reluctant to raise external capital and forgo mergers if external finance is required.

Above-mentioned studies suggest that acquirers with different financial conditions exhibit different behaviors, which may help to explain the inconclusive evidence on the role of top-tier investment bankers in M&A deals. Specifically, acquirers with abundant cash flows tend to overestimate their ability to generate excess returns

(Croci et al., 2010; Doukas and Petmezas, 2007; Malmendier and Tate, 2008; Roll, 1986). Thus, it is highly possible that they do not rely on investment bankers to identify synergistic targets, and employ top-tier advisors solely to complete their intended M&A deals. In contrast, acquirers with financial constraints do not have sufficient internal funds to finance M&A deals, and high financing costs force constrained firms to make acquisition decision rationally and carefully. Consequently, constrained acquirers are likely to retain top-tier advisors to obtain acquisition synergy. However, there is no empirical research has directly examined whether the effects of top-tier investment bankers differ across acquirers with different financial conditions. This paper, therefore, aims to fill this void in the literature. Specifically, we examine acquirer short- and long-term performance and, more importantly, investigate whether the effects of top-tier advisors are dependent on acquirer financial conditions.

Therefore, we analyze a large sample of US M&As over the 1990–2012 period, and divide the deals into three groups – acquisitions by constrained, neutral, and unconstrained acquirers. Specifically, we use KZ index to classify acquirer financial constraints. The lowest (highest) one third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers.[2] We use market share-based league table to measure investment banker reputation. Specifically, top-10 investment banks on the league table are defined as top-tier advisors, while others are defined as non-top-tier advisors.[3] We show that top-tier investment bankers help financially constrained acquirers improve performance in both the short and long term. By contrast, the effects of top-tier investment bankers are insignificant for unconstrained and neutral acquirers, which is consistent with most of previous literature.[4] For deals with investment banker involvement, constrained acquirers advised by top-tier advisors gain highest short- and long-term abnormal returns, and pay lowest bid premiums, while unconstrained acquirers advised by top-tier advisors have highest deal completion rate. These results suggest that constrained acquirers retain top-tier advisors to improve takeover performance and bargaining power, while unconstrained

[2] We also use SA Index to measure acquirer financial constraint as the robustness check. Acquirers with higher SA Index are more constrained. Robustness tests are discussed in Section 4.
[3] Investment bank league tables are acquired from Thomson One Banker. We also use other classifications to define top-tier advisors. Robustness tests are discussed in Section 4.
[4] See Hunter and Jagtiani (2003); Ismail (2010); Michel et al. (1991); Rau (2000); Servaes and Zenner (1996).

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acquirers advised top-tier advisors give priority to deal completion. In other words, the effects of top-tier advisors are dependent on acquirer financial conditions.

This research contributes to the M&A literature in the following two aspects. First, this paper sheds new light on puzzling empirical evidence on the effects of top-tier investment bankers. We highlight that the effects of top-tier advisors are sensitive to acquirer financial conditions. By examining abnormal returns to acquirers in different advisor–constraint groups, we provide novel evidence on the impact of top-tier advisors on acquirer performance. In particular, we find that top-tier advisors create value for their clients, but only if their clients are financially constrained acquirers.

Second, this paper emphasizes the importance of long-term effects of financial advisors. Most studies [5] only focus on investment bankers' effects on acquirer performance in the short term. However, financial advisors engage in not only deal negotiation but also post-deal integration. If the synergies identified and secured by top-tier advisors exist, then it will take time to transfer them into improved performance through post-deal integration and to demonstrate them to the market. To fill this void in research, this paper investigates the effects of advisors on acquirer performance in both the short and long term.

Our findings also have important strategic implications for practitioners. Prestigious investment bankers have superior abilities to improve their clients bargaining power and takeover performance. They also have stronger skills in deal completion. However, our research suggests whether top-tier bankers can fulfill their potential is determine by clients' aims. We emphasize that the positive effects of top-tier investment bankers can be offset by acquirers' overconfidence. Stock markets reward acquirers who make acquisition decisions rationally and elaborately.

The remainder of this paper is organized as follows. Section 2 presents the data selection procedure and methodology. Section 3 discusses the empirical results. Robustness tests are carried out in Section 4. Section 5 concludes this paper.

[5] See Bao and Edmans (2011); Bowers and Miller (1990); da Silva Rosa et al. (2004); Golubov et al. (2012); Ismail (2010); Kale et al. (2003); McLaughlin (1992); Michel et al. (1991); Schiereck et al. (2009); Servaes and Zenner (1996); Walter et al. (2008).

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## 2. Data and methodology

### *2.1. Sample selection*

This paper analyzes a sample of US domestic M&As announced over the 1st January 1990 – 31st December 2012. Initially, we acquire a sample of 28220 deals from Thomson One Banker.[6] Since this paper focuses on the effects of investment bankers, acquirers are required to have their advisor information recorded by Thomson One Banker, yielding 6782 deals. To control for deal characteristics, observations are required report transaction value and payment method information to Thomson One Banker, which leaves a sample of 5910 deals. To calculate short- and long-term abnormal returns, acquirers are required to file sufficient stock price data with the Center for Research in Security Prices (CRSP) database, which leaves a sample of 5505 deals.[7] To measure financial constraints and other firm characteristics, acquirers are required to have sufficient accounting data in the Compustat database, yielding a final sample of 3420 deals.[8] In the final sample, 3323 transactions are advised by investment banks, and 97 transactions are in-house deals.

### *2.2. Methodology*

#### *Measure of advisor reputation*

Following the method of Golubov et al. (2012), this research uses a binary classification to distinguish between top-tier and non-top-tier advisors. Specifically, the top 10 banks measured by transaction value are classified as top-tier advisors and the others are classified as non-top-tier advisors[9]. Since the eighth and tenth advisors are very similar in transaction values and market shares, this paper uses the top 10 as the cut-off point, unlike the top-eight classification of Golubov et al. (2012).

[6] The original sample includes 203,415 deals. Acquirers are required to be public and targets are required to be public, private, or subsidiaries. A subsidiary firm is a separate company controlled by a parent company. Large public firms always own small private subsidiaries. Therefore, subsidiaries are included, independent on whether they are public or private. Using these criteria yields a sample of 105,565 deals. Takeover transaction values are required to be greater than or equal to $1 million, yielding a sample of 58,742 deals. Regulated industries such as financial and utility firms (Standard Industrial Classification codes 6000–6999 and 4900–4999, respectively) are excluded, yielding a sample of 41,396 deals. Bankruptcy acquisitions, going-private transactions, leveraged buyouts, liquidations, repurchases, restructurings, reverse takeovers, and privatizations are excluded from the sample, leaving a sample of 28,220 observations.

[7] Calculating size-adjusted BHARs also requires data on the book value of equity from the Compustat database.

[8] This paper uses the KZ index to measure financial constraints. To calculate the KZ index, COMPUSTAT items 1, 6, 8, 9, 14, 18, 19, 21, 24, 25, 34, 60, 74, and 216 are required.

[9] Appendix 1 shows the top 25 investment banks ranked by transaction value. Financial advisor league tables were downloaded from Thomson One Banker.

To prevent misclassification, this paper also pays attention to takeovers among investment banks. For instance, Lehman Brothers declared bankruptcy in 2008 and was acquired by Barclays Capital the same year. Therefore, deals advised by Barclays Capital before the acquisition of Lehman Brothers (top tier) are classified as being advised by a non-top-tier investment bank, whereas deals advised by Barclays Capital after the acquisition are classified as advised by a top-tier bank. Similarly, First Boston (top tier) was acquired by Credit Suisse in 1990. Travelers Group acquired Salomon Brothers (top tier) in 1998 and subsequently merged with Citicorp the same year, establishing Citigroup.

***Measure of financial constraint***

This paper uses the Kaplan–Zingales (KZ) index to measure acquirer financial constraints. Using a sample of 49 low-dividend firms from 1970 to 1984, Kaplan and Zingales (1997) investigate the proper measure of firms' financial constraints. Specifically, they identify constrained and unconstrained firms by analyzing annual reports and management discussions. Subsequently, they consider firm characteristics (ratio of cash flow to capital, Tobin's Q, leverage, ratio of dividends to capital, and ratio of cash to capital) that relate to financing constraints to estimate an ordered logit regression. The parameters of the regression are used to formulate the KZ index, thereby measuring a firm's level of financial constraint (Lamont et al., 2001). A higher KZ index indicates a higher level of financial constraint. The KZ index is widely used in research to measure firm financial constraints (e.g. Baker et al., 2003; Guariglia and Yang, 2016; Li, 2011; Malmendier and Tate, 2005, 2008).

Following the aforementioned research, we calculate the KZ index using the following formula:

$$KZ_{it} = -1.001909 \times \frac{CF_{it}}{K_{it-1}} + 0.2826389 \times Q_{it} + 3.139193 \times Leverage_{it} - 39.3678 \times \frac{Divendend_{it}}{K_{it-1}} - 1.314759 \times \frac{C_{it}}{K_{it-1}}$$

where $CF_{it}/K_{it-1}$ is cash flow (Compustat item IB+DP) over lagged capital (Compustat item PPENT), $Q_{it}$ is Tobin's Q ratio (Compustat item (AT+PRCC×CSHO-CEQ-TXDB)/AT), $Leverage_{it}$ is the leverage ratio (Compustat item (DLTT+DLC)/(DLTT+DLC+SEQ)); $Divendend_{it}/K_{it-1}$ is dividends (Compustat item

DVC+DVP) over lagged capital (Compustat item PPENT), and $C_{it}/K_{it-1}$ is cash (Compustat item CHE) over lagged capital (Compustat item PPENT).

We divide acquirers into three groups based on their KZ index. Specifically, the lowest (highest) third of acquirers ranked by KZ index are defined as unconstrained (constrained). The middle third of acquirers are classified as neutral acquirers.[10]

***Short-term performance***

Bouwman et al. (2009) argue that the presence of serial bidders implies that multiple takeovers may be announced during the estimation period for the market model, and therefore the parameter estimates will be biased. In line with these authors, this paper uses market-adjusted cumulative abnormal returns (CARs) to measure acquirer short-term performance. Market-adjusted abnormal returns are defined as

$$AR_{it} = R_{it} - R_{mt}$$

where $R_{it}$ is the daily stock return for firm *i* on date *t* and $R_{mt}$ is the daily return for the value-weighted CRSP index on date *t*.

Subsequently, market-adjusted CARs are calculated over a [-2, 2] window around announcements (CAR[-2, 2]), as follows:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}.$$

***Long-term performance***

This paper use buy-and-hold abnormal returns to measure acquirer long-term performance in completed deals. Test statistics of long-term market-adjusted abnormal returns are misspecified due to rebalancing bias, new-listing bias, and skewness bias (Barber and Lyon, 1997; Lyon et al., 1999). To address these problems, Lyon et al. (1999) and Bouwman et al. (2009) use size-adjusted buy-and-hold abnormal returns (BHARs) to measure long-term stock performance. Therefore, this paper calculates post-merger 36-month size-adjusted BHARs (BHAR36). Specifically, size-adjusted BHARs are calculated as follows:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2}(1 + R_{it}) - \prod_{t=T_1}^{T_2}(1 + R_{pt})$$

[10] Additional results obtained using an alternative methodology of constrained acquirers are discussed in Section 4 below.

where $R_{it}$ is the monthly stock return for firm $i$ in month $t$ and $R_{pt}$ is the monthly return for reference portfolio in month $t$, calculated as

$$R_{pt} = \frac{1}{N}\sum_{j=1}^{N} R_{jt}$$

where $R_{jt}$ the monthly stock return for firm $j$ in month $t$ and $N$ the number of firms.

In each year, we construct 50 reference portfolios based on size and market-to-book. The reference portfolios are created in two stages, following Bouwman et al. (2009). First, from 1990 to 2009, all NYSE firms are sorted into deciles on the basis of their market value, calculated as the stock price multiplied by the number of common shares outstanding in June of year $t$. Second, within each size decile, firms are sorted into quintiles based on their market-to-book ratios, calculated as the market value of equity in June of year $t$ divided by the book value of equity in fiscal year $t$ - 1. After all NYSE firms are categorized into 50 groups, AMEX and NASDAQ firms are placed in their proper reference portfolios based on market value and market-to-book ratios. Additionally, firms that conducted acquisitions in year $t$ are excluded from the reference portfolios.

***Multivariate analysis***

The variation in acquirer abnormal returns can be explained by multiple variables. Multivariate regressions are conducted to examine the effects of top-tier investment banks[11]. The following equation is employed to examine the relation between acquirer performance and the retention of top-tier investment banks:

$$\begin{aligned} Performance_i &= \alpha_0 + \alpha_1 TopTier_i + \alpha_2 TopTier_i \times Constrained_i + \alpha_3 TopTier_i \\ &\times Unconstrained_i + \alpha_4 Constrained_i + \alpha_5 Unconstrained_i \\ &+ \alpha_6 Firm_i + \alpha_7 Deal_i + \alpha_8 Market_i + f_t + f_{ind.} + \varepsilon_i \end{aligned}$$

where $Performance_i$ is the performance of acquirer $i$, and it can be either short-term or long-term. $TopTier_i$ is the key explanatory variable in this research and equals one if acquirer $i$ retains a top-tier advisor for the deal. $Constrained_i$ ($Unconstrained_i$) is a dummy that equals one if acquirer $i$ is financially constrained (unconstrained). $TopTier_i \times Constrained_i$ ($TopTier_i \times Unconstrained_i$) is the interaction variable that

[11] All the control variables mentioned in this section are described in Appendix 2.

interacts the $TopTier_i$ dummy and $Constrained_i$ ($Unconstrained_i$) dummy. $Firm_i$ represents the firm characteristics of acquirer *i* at the end of fiscal year prior to the announcement, including size (*LN(MV)*), market-to-book ratio (*M/B*), leverage (*Leverage*), cash flows-to-equity ratio (*Cash flows/Equity*), pre-deal stock performance (*RUNUP*), risk of stock (*Sigma*), acquirer takeover experience (*Experienced Bidder*), and whether the acquirer is a serial bidder (*Serial Bidder*). $Deal_i$ represents the deal characteristics for acquirer *i,* including relative transaction values (*Relative Size*), target public status (*Public*), payment method (*Cash/Stock*), deal attitude (*Hostile*), bid competition (*Competing Bid*), tender offers (*Tender Offer*), and diversifying deals (*Diversification*). $Market_i$ represents market characteristics for acquirer *i*, including M&A market heat (*M&A Heat Degree*) and stock market valuation (*High/Low Valuation Market*).

We also control for year fixed effects ($f_t$) and industry fixed effects ($f_{ind.}$). To minimize the influence of outliers, all quantitative variables are winsorized at 1% and 99%.[12]

### *2.3. Summary statistics*

Table 1 exhibits summary statistics for the entire sample.[13] In our sample, 48.16% and 49.01% of deals are advised by top-tier and non-top-tier advisors, respectively. In-house deals account for only 2.84% of the sample.

***Insert Table 1 Here***

Panel A of Table 1 shows both short- and long-term abnormal returns for acquirers. For the full sample, acquirers' CAR [-2, 2] and BHAR36 average 1.08% and -37.25%, respectively. Deals advised by top-tier advisors generate significantly lower short-term returns but significantly higher long-term returns for acquirers than deals advised by non-top-tier advisors.

Panel B of Table 1 presents statistics for firm characteristics. The KZ index for acquirers averages -14.61 over the sample period (1990–2012). Additionally, acquirers that retain top-tier advisors have a higher KZ index than acquirers that retain

[12] Results hold when the variables are winsorized at different levels, such as 2% and 98%, 3% and 97%, and 5% and 95%.

[13] All the variables mentioned in this section are described in Appendix 2, where Panels A to D present acquirer short- and long-term abnormal returns, acquirer firm characteristics, deal characteristics, and market characteristics, respectively.



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non-top-tier advisors (-11.67 versus -18.12), indicating that acquirers advised by top-tier advisors are more constrained than acquirers advised by non-top-tier advisors. Furthermore, compared with acquirers advised by non-top-tier advisors, acquirers that retain top-tier advisors tend to be larger firms, glamour firms, firms with higher leverage, firms with higher cash flows-to-equity ratio, firms with lower stock performance and lower risk, firms with more takeover experienced, and serial bidder.

Panel C shows the deal characteristics. Top-tier advisors are more likely to be retained in acquisitions with higher transaction value but lower relative size, public acquisitions, all-cash deals, hostile deals, competing bids, and tender offers. In addition, top-tier advisors take more time to complete deals and help their clients pay lower bid premiums. Top-tier advisors charge higher advisory fees. However, when the deal value is taken into consideration, acquirer pay lower relative advisory fees in deals advised by top-tier advisors.

Panel D presents the market characteristics. M&A Heat Degree is significantly negatively related to the retention of top-tier advisors, indicating that acquirers in a relatively cold M&A market tend to choose top-tier advisors. In addition, acquirers are more likely to choose top-tier advisors when stock market valuations are low or neutral.

The correlation matrix of variables used in regression analyses is shown in Table 2. The results show relatively low correlation between most independent variables. In particular, the correlation between *TopTier* dummy and other variables, and the correlations between KZ index and other variables are low, suggesting that it is unlikely to cause the concern about multicollinearity in regression analyses.

***Insert Table 2 Here***

## 3. Empirical results

### *3.1. Univariate analysis*

#### *Short-term performance*

Table 3 reports the short-term performance (CAR [-2, 2]) for different advisor–constraint groups and their univariate comparison.

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***Insert Table 3 Here***

Panel A of Table 3 shows the announcement abnormal returns for the sample of deals advised by investment banks. On average, constrained acquirers significantly outperform unconstrained acquirers by 1.49% ($p$ = 0.000). This result is consistent with the free cash flow hypothesis that cash-rich acquirers tend to conduct value-destroying takeovers (Harford, 1999; Jensen, 1986; Smith and Kim, 1994).

Panel B of Table 2 shows that deals advised by top-tier advisors generate significantly positive announcement abnormal returns for constrained acquirers, but significantly negative abnormal returns for unconstrained acquirers. For deals advised by top-tier advisors, constrained acquirers significantly outperform unconstrained acquirers by 3.19% ($p$ = 0.000) on average, while median constrained acquirer outperform median unconstrained acquirer by 2.06% ($p$ = 0.000).

Panel C of Table 3 represents the announcement abnormal returns for acquirers advised by non-top-tier advisors. The results suggest there is no significant difference in abnormal returns between constrained and unconstrained acquirers. These results indicate that constrained acquirers do not outperform unconstrained acquirers without the services of top-tier advisors. If the free cash flow hypothesis can explain all the variation in acquirer short-term performance, constrained acquirers should also outperform unconstrained acquirers in deals advised by non-top-tier advisors. Our results suggest that top-tier advisors play a pivotal role in helping constrained acquirers gain superior performance.

Panel D shows the differences in acquirer announcement abnormal returns between deals advised by top-tier and non-top-tier advisors. For the full sample, acquirers advised by top-tier advisors underperform acquirers advised by non-top-tier advisors by 0.94% ($p$ = 0.003) on average. This result is attributed to unconstrained and neutral acquirers. On average, unconstrained acquirers advised by top-tier advisors significantly underperform unconstrained acquirers advised by non-top-tier advisors by 2.33% ($p$ = 0.000), while neutral acquirers advised by top-tier advisors significantly underperform neutral acquirers advised by non-top-tier advisors by 1.43% ($p$ = 0.004). These results are consistent with the previous literature that the

retention of top-tier advisors does not lead to outperformance and even has negative effects on acquirer returns (Hunter and Jagtiani, 2003; Ismail, 2010; Michel et al., 1991; Rau, 2000; Servaes and Zenner, 1996). In contrast, constrained acquirers advised by top-tier advisors significantly outperform constrained acquirers advised by non-top-tier advisors by 0.83% ($p$ = 0.073), which is consistent with the findings of Golubov et al. (2012) that top-tier advisors have superior ability to improve their clients' announcement performance. The above results suggest that the retention of top-tier advisors has positive effects on the announcement returns of constrained acquirers, but has negative effects on the performance of unconstrained acquirers. In other words, the impact of top-tier advisors is sensitive to acquirer financial conditions: this sheds new light on the inconclusive evidence regarding this reputation–quality mechanism. Additionally, constrained acquirers advised by top-tier advisors gain the highest short-term abnormal returns (2.31%, $p$ = 0.000), whereas unconstrained acquirers advised by top-tier advisors gain the lowest abnormal returns (-0.88%, $p$ = 0.042). Acquirers with different financial conditions have different aims and show different behaviors (Malmendier and Tate, 2008). These results suggest that constrained acquirers retain top-tier advisors to chase performance, whereas unconstrained acquirers that retain top-tier advisors do not give priority to takeover gains.

***Long-term performance***

Table 4 reports the long-term performance (BHAR36) for different constraint–advisor groups and their univariate comparison.[14] Long-term abnormal returns are significantly negative for each constraint–advisor group, which is consistent with previous research (Bouwman et al., 2009). However, Shleifer and Vishny (2003) suggest overvalued acquirers gain profits through acquisitions of undervalued targets, although long-term abnormal returns are negative, since acquirers will gain more negative returns without acquisitions.

***Insert Table 4 Here***

Panels A to C represent acquirer long-term size-adjusted BHARs for the sample of completed deals advised by investment banks, deals advised by top-tier advisors, and

[14] This paper only measures acquirer long-term performance for completed deals.

deals advised by non-top-tier advisors, respectively. For the full sample, constrained acquirers significantly outperform unconstrained acquirers by 12.44% ($p$ = 0.001) on average. Similarly, for deals advised by top-tier advisors, constrained acquirers significantly outperform unconstrained acquirers by 17.12% ($p$ = 0.001) on average. For deals advised by non-top-tier advisors, median constrained acquirer outperform median unconstrained acquirer by 4.91% ($p$ = 0.064). The results concur with the free cash flow hypothesis.

Panel D shows the differences in long-term performance between deals advised by top-tier and non-top-tier advisors. For the full sample, acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors by 15.73% ($p$ = 0.000) on average, while median acquirer advised by top-tier advisor outperform median acquirer advised by no-top-tier advisor by 19.31% ($p$ = 0.000). In addition, the outperformance of acquirers advised by top-tier advisors is also shown in constrained, neutral, and unconstrained acquirer subsamples. The results suggest that top-tier advisors can help their clients improve performance in the long term. However, constrained acquirers advised by top-tier advisors have the best long-term performance.

***Deal completion rate, time to resolution, bid premiums, and advisory fees***

Table 5 reports deal completion rate for different constraint–advisor groups and their univariate comparison. Regardless of financial conditions and advisor retention status, deal completion rates are above 90%. For the sample of deals advised by investment banks, the deal completion rate for constrained acquirers is 4.82% ($p$ = 0.000) lower than that for unconstrained acquirers. Similarly, for deals advised by top-tier and non-to-tier advisors, constrained acquirers have significantly lower deal completion rates, compared to unconstrained acquirers. In addition, the results suggest top-tier advisors do not help acquirers to improve deal completion rate on average. For constrained and neutral acquirers, deals advised by top-tier advisors even have lower deal completion rate, although the results are insignificant. However, unconstrained acquirers advised by top-tier advisors have the highest deal completion rate (95.19%). In contrast, constrained acquirers advised by top-tier advisors have the lowest deal completion rate (90.09%). These results suggest that unconstrained acquirers retain top-tier advisors to pursue deal completion.

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***Insert Table 5 Here***

Table 6 reports the time to resolution for different constraint–advisor groups and their univariate comparison. Time to resolution is measured as the number of days between the announcement and effective dates. Compared with unconstrained acquirers, constrained acquirers use 31.17 ($p$ = 0.000) more days to complete deals on average. In addition, in deals advised by top-tier advisors and deals advised by non-top-tier advisors, the time to resolution is significantly longer for constrained acquirers than unconstrained acquirers. These results suggest that constrained acquirers are more careful in conducting takeovers. Furthermore, acquirers advised by top-tier advisors take 19.72 ($p$ = 0.000) more days to complete deals than acquirers advised by non-top-tier advisors. For all three different constraint groups, time to resolution is significantly higher for acquirers advised by top-tier advisors. If top-tier advisors have superior skills, they can take less time to complete deals. On one hand, it is possible that top-tier advisors are retained in more complex deals, and therefore they use longer time to complete deals. On the other hand, the results may suggest top-tier advisors work diligently.

***Insert Table 6 Here***

Table 7 shows the bid premiums for different constraint–advisor groups and their univariate comparison. Bid premiums, obtained from Thomson One Banker, are calculated as the difference between the deal price and the target's stock price four weeks prior to the announcement divided by the latter term. Following Golubov et al. (2012); Officer (2003), we winsorized the variable if values are beyond the range of [0, 2]. If acquirers have higher bargaining power, they will pay lower bid premiums. For the full sample, constrained acquirers pay significantly lower premiums than unconstrained acquirers, indicating that constrained acquirers care more about takeover performance than unconstrained acquirers do. On average, acquirers advised by top-tier advisors pay significantly lower bid premiums than acquirers advised by non-top-tier advisors do, which suggests that top-tier advisors help their clients gain stronger bargaining power in the negotiation process and therefore secure more shares of synergy. On average, constrained acquirers advised by top-tier advisors pay the lowest bid premium (38.21%).

***Insert Table 7 Here***

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Table 8 shows the acquirer relative advisory fees for different constraint–advisor groups and their univariate comparison. Relative advisory fees are measured as acquirer total advisory fees divided by takeover transaction value. It has been shown in the summary statistics that top-tier advisors charge premium advisory fees. However, if top-tier advisors are retained in complex deals, it is reasonable that top-tier advisors charge higher advisory fees for deals with higher transaction value. Therefore, it is necessary to examine relative advisory fees. The results suggest top-tier advisors charge significantly lower relative advisory fees than non-top-tier advisors, which is consistent with the univariate test result in Golubov et al. (2012). In other words, acquirers do not overpay top-tier advisors. In addition, it is not surprising that constrained acquirers pay significantly lower relative advisory fees than unconstrained acquirers do. However, the result is driven by the subsample of deals advised by top-tier advisors. For deals advised by non-top-tier advisors, there is no significant difference between constrained and unconstrained acquirers.

***Insert Table 8 Here***

Overall, for deals with investment banks' advisory service, constrained acquirers advised by top-tier advisors gain the highest short- and long-term performance, pay the lowest bid premiums and relative advisory fees, and have the lowest deal completion rate. In contrast, unconstrained acquirers advised by top-tier advisors have the highest deal completion rate, but gain the lowest announcement returns. They also gain lower long-term returns, and pay higher bid premiums and relative advisory fees. These results suggest that constrained and unconstrained acquirers advised by top-tier advisors give priority to takeover performance and deal completion, respectively. In other words, constrained acquirers retain top-tier advisors to chase performance, whereas unconstrained acquirers retain top-tier advisors to complete their intended deals.

### *3.2. Multivariate analysis*

We conduct multivariate regressions to further address the research question. Specifically, we conduct regressions of short- and long-term abnormal returns on top-tier advisors for deals advised by investment banks.

***Short-term performance***

Table 9 shows the results of the short-term multivariate analysis for deals advised by investment banks. Specifications 1 and 2 represent the regressions of CAR [-2, 2] on top-tier advisors for all acquirers. Specifications 3, 4, and 5 represent the regressions for constrained, neutral, and unconstrained acquirers, respectively.

***Insert Table 9 Here***

The *TopTier* dummy, the key explanatory variable of this paper, is insignificant in specification 1, suggesting that top-tier advisors do not help acquirers to improve announcement performance. This result is consistent with the view that bank reputation does not have positive effects on acquirer performance (Hunter and Jagtiani, 2003; Ismail, 2010; Michel et al., 1991; Rau, 2000; Servaes and Zenner, 1996). However, the univariate tests in section 4.1 suggest that the positive effects of top-tier advisors are only shown in the subsample of constrained acquirers, and the acquirers advised by top-tier advisors gain the highest announcement returns. In other words, constrained acquirers retain top-tier advisors to chase performance. To examine this proposition, we add two dummy variables for constrained and unconstrained acquirers (*Constrained* dummy and *Unconstrained* dummy) and interact them with the *TopTier* dummy in specification 2. As a result, we find that the interaction between *TopTier* dummy and *Constrained* dummy is significantly positive, whereas the *TopTier*×*Unconstrained* interaction is insignificant. The results suggest that the effects of top-tier advisors depend on acquirer financial conditions. More specifically, top-tier advisors improve their clients' announcement performance, but only for constrained acquirers. These results concur with those of Golubov et al. (2012) that prestigious banks provide superior M&A advisory services. The *Constrained and Unconstrained* dummies are insignificant in the specification 2, suggesting that financial constraint is not a determinant of acquirer announcement performance when firm, deal, and market characteristics are controlled for. In addition, the *TopTier* dummy is significantly positive in the regression of constrained acquirer subsample (specification 3), but insignificant in the regressions of neutral and unconstrained acquirer subsamples (specifications 4 and 5), which is consistent with the result of specification 2. As can be seen from specification 3, top-tier advisors can

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help constrained acquirers improve announcement abnormal returns by 1.45%. However, for unconstrained and neutral acquirers, the retention of top-tier advisors does not enhance announcement performance. These results support the reputation–quality mechanism; however, the impacts of bank reputation are sensitive to acquirers' financial conditions, which adds new evidence on the service quality of prestigious investment banks.

Furthermore, the variable *LN(MV)* is significantly negative in specifications 1 to 3, suggesting that larger firms tend to gain lower announcement returns. Moeller et al. (2004) examine the effects of firm size on M&A performance, and also find that acquirer announcement returns negatively associate with the size of the company. The variable *Cash Flows/Equity* is significantly positive in specifications 1 to 3, indicating that acquirers with higher cash flows-to-equity ratio have better short-term performance. The variable *Relative Size* is significantly positive in specifications 1 and 2, which is consistent with the findings of Fuller et al. (2002) that deals with larger relative size create more announcement returns for acquirers. The *Public* dummy is significantly negative in all specifications, implying that acquirers underperform in public acquisitions. Similarly, Chang (1998) and Fuller et al. (2002) show that acquirers gain higher returns in private acquisitions than in public acquisitions. The *Cash* dummy is significantly positive in all specifications, suggesting that cash deals have better announcement performance. The *Hostile* dummy is significantly negative in specifications 1 to 3, indicating that acquirers in hostile deals underperform around announcements. The *Competing Bid* dummy is significantly negative in specifications 1 to 4, which is consistent with the conclusion of De et al. (1996) that takeover contests have a detrimental influence on acquirer announcement returns. The *Tender Offer* dummy is significantly positive in all specifications, implying that acquirers gain higher announcement returns in tender offers. The result is in line with Loughran and Vijh (1997), who find that tender offer is positively related to acquirer performance. The *Diversification* dummy is significantly negative in specifications 1 to 3, suggesting that diversifying deals destroy value for acquirers, which is consistent with the previous literature (Berger and Ofek, 1995; Lang and Stulz, 1994). The *Low Valuation Market* dummy is significantly negative in specifications 1 to 3, indicating that acquirers underperform around announcements, when the deals are conducted during a "bear" market.

Bouwman et al. (2009) examine the difference in acquirer performance between acquisitions in "bull" and "bear" markets, and find that acquirers in high-valuation markets outperform in the short term compared to acquirers in low-valuation markets. Our result is qualitatively similar to that of Bouwman et al. (2009).

***Long-term performance***

Table 10 shows the results of the long-term multivariate analysis for completed deals with investment banks' advisory service. Specifications 1 and 2 represent the regressions of BHAR36 on top-tier advisors for all acquirers. Specifications 3, 4, and 5 represent the regressions for constrained, neutral, and unconstrained acquirers, respectively.

***Insert Table 10 Here***

The coefficient of the *TopTier* dummy is positive for specification 1 (regression for the full sample), suggesting that top-tier advisors improve acquirers' performance in the long term. The result supports the view that prestigious banks have superior skills (Golubov et al., 2012). Most studies only examine the effects of bank reputation on acquirer short-term performance. This result adds new evidence to the research on the reputation–quality mechanism, and highlights the importance of the long-term effects of top-tier advisors. However, the *TopTier* dummy loses its significance in the specification 2, when the interactions between top-tier status and financial constraint are added in the regression. In particular, the *TopTier*×*Unconstrained* interaction is insignificant, whereas the *TopTier*×*Constrained* interaction is significantly positive, suggesting that top-tier advisors improve their clients' long-term performance for constrained acquirers rather than unconstrained acquirers. In addition to the regressions of short-term performance, the result further shows that the effects of top-tier advisors differ across acquirers with different financial conditions. In addition, *Constrained and Unconstrained* dummies are insignificant in specification 2, suggesting that financial constraint has no significant influence on acquirer long-term performance when firm, deal, and market characteristics are controlled for. Furthermore, the results of subsample regressions are consistent with those of specification 2. Specifically, the *Top-Tier* dummy is significantly positive in specification 3 (constrained acquirers) but insignificant for specifications 4 (neutral

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acquirers) and 5 (unconstrained acquirers). According to specification 3, constrained acquirers advised by top-tier advisors outperform constrained acquirers advised by non-top-tier advisors by 24.27% in the long term. These results suggest that top-tier advisors help constrained acquirers gain significantly higher long-term abnormal returns, but do not improve performance for unconstrained and neutral acquirers. The results again show that the effects of top-tier advisors are sensitive to acquirer financial conditions.

Additionally, the variable *LN(MV)* is significantly negative in specifications 1 to 3, indicating that larger acquirers underperform in the long term. The variable *M/B* is significantly negative in specifications 1 to 4, which is consistent with Rau and Vermaelen (1998), who find that glamour acquirers underperform in the long term. The variable *Leverage* is significantly positive in specifications 1 and 3, implying that acquirers with higher leverage ratio gain better long-term performance. Similarly, Maloney et al. (1993) investigate the relation between capital structure and M&A returns. They find that acquirers with higher leverage obtain higher returns, and argue that debt helps to alleviate agency problem and therefore improve the quality of M&A decision-making. The variable *Cash Flows/Equity* is significantly positive in specifications 1, 2 and 4, indicating that acquirers who have better operating performance before acquisitions tend to gain higher long-term returns. Kohers and Kohers (2001) analyze takeovers of high-tech firms and find positive relationship between pre-deal operating performance and post-deal long-term abnormal returns to acquirers. The variable *RUNUP* is significantly negative in specifications 1 to 4, indicating that firms with better stock performance prior to announcements do not maintain their performance during the post-merger period. Similarly, Rosen (2006) finds that acquirer runup is negatively related to both short- and long-term abnormal returns for acquirers. The variable *Sigma* is significantly negative in specifications 1 and 2, suggesting that acquirers with higher risk of stocks underperform in the long term. The result is consistent with the work of Moeller et al. (2007), which shows negative relations between acquirer stock return volatility and acquirer performance. The variable *Relative Size* is significantly positive in specification 5, suggesting that acquisitions of relatively larger targets generate higher long-term returns for acquirers. The *Cash* dummy is significantly positive in specification 5, suggesting that acquirers outperform in cash deals. Loughran and Vijh (1997) also show that deals paid by cash

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generate more returns to acquirers in the long term than deals paid by stock. The variable *Hostile* is significantly positive in specifications 1 to 3, indicating that acquirers gain higher long-term returns in hostile deals. Schwert (2000) points out that hostile takeovers are strategically employed by acquirers or targets to maximize their gains.

## 4. Robustness test

This section addresses the robustness of our results.[15]

### *Financial advisor classification*

We evaluate whether our results are sensitive to different financial advisor classifications. Specifically, we follow the method of Golubov et al. (2012), using the top-eight cut-off point.[16] In addition, since the investment bank league table is market share-based, we also use different thresholds (e.g. 8% and 10%) of market share to define top-tier advisors. Furthermore, since the sample period of this research is longer than two decades, we also measure bank ranking separately over 1990s and post-2000 period. To examine whether the league table is sensitive to the time intervals, we also examine the bank ranking over each three-year period. By using different definitions of top-tier advisors, our results are not qualitatively changed.

### *Measure of financial constraint*

To examine whether our results are sensitive to the measure of financial constraint, we also use the SA index (Hadlock and Pierce, 2010) to classify financial constraints of firms. Hadlock and Pierce (2010) argue that firm size and age are the reliable indictors of financial constraints and introduce the SA index. Following Hadlock and Pierce (2010), we calculate the SA index using the following formula:

$$\mathrm{SA} = (-0.737 \times \mathrm{Size}) + (0.043 \times \mathrm{Size}^2) - (0.040 \times \mathrm{Age})$$

where Size is the natural logarithm of total assets (inflation adjusted to 2004), and Age is the number of years the firm is listed on Compustat. When the SA index is

[15] This paper does not tabulate the robustness results for brevity; however, the results are available upon request.
[16] The top-eight investment banks on the market-share based league table are defined as top-tier advisors.

calculated, Size is winsorized at (the log of) $4.5 billion, and Age is winsorized at 37 years.

Companies with higher SA index, lower age, and larger size are more financially constrained. By using SA index, age, and size to measure financial constraint, our results are qualitatively similar.

***Short-term performance***

We use alternative event windows and valuation models to measure acquirer short-term performance. Specifically, we calculate CARs over the [-1, 1] and [-5, 5] windows. In addition, we apply the market model, the Fama-French three-factor model, and the Fama-French-momentum four-factor model to compute announcement abnormal returns. The results are not sensitive to these variations.

***Long-term performance***

We also use alternative event windows and valuation models to measure acquirer long-term performance. Specifically, we calculate BHARs over 12-month and 24-month windows. In addition, we calculate market-adjusted BHARs. For size-adjusted BHARs, we also use following alternative formula:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2}(1 + R_{it}) - 1 - R_{pt}$$

where $R_{it}$ is the monthly stock return for firm $i$ in month $t$ and $R_{pt}$ is the monthly buy-and-hold return for the reference portfolio in month $t$, calculated as

$$R_{pt} = \sum_{j=1}^{n} \frac{\prod_{t=T_1}^{T2}(1 + R_{jt}) - 1}{n}$$

with $R_{jt}$ the monthly stock return for firm $j$ in month $t$ and $n$ the number of firms.

The results are robust to these variations.

***Other issues***

To control for the influence of outliers, we also winsorize all the quantitative variables at different levels, such as 2% and 98%, 3% and 97%, and 5% and 95%. In addition, bid premium is measured as the difference between offer price and target price four weeks prior to the announcement divided by the latter term. To calculate bid

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premiums, we also measure target prices one week and one day before the announcement. We also use a binary classification to distinguish between constrained and unconstrained acquirers. Specifically, the highest third of acquirers ranked by KZ index are defined as constrained, and the others are defined as unconstrained acquirers. However, the results are not sensitive to the above variations.

## 5. Conclusions

This paper examines whether top-tier investment bankers can help acquirers gain superior takeover performance in both the short and long term and, more importantly, whether the effects of top-tier advisors are dependent on acquirer financial constraints. In line with Malmendier and Tate (2008) that financially unconstrained acquirers tend to be overconfident and therefore make value-decreasing takeovers, this paper show that the retention of top-tier advisors improves acquirer performance, but only for constrained acquirers. Specifically, in the short term, retaining top-tier advisors can help constrained acquirers improve announcement abnormal returns by 1.45%, after controlling for firm, deal, and market characteristics. However, the retention of top-tier advisors does not improve short-term performance for unconstrained and neutral acquirers. In the long term, the retention of top-tier advisors is positively related to acquirer performance. The result is driven by the sub-sample of constrained acquirers. For constrained acquirers, the retention of top-tier advisors improves long-term performance by 24.27%, after firm, deal, and market characteristics are controlled for. In contrast, the effects of top-tier advisors are insignificant for unconstrained and neutral acquirers. Therefore, the results indicate that the effects of top-tier advisors on acquirer performance differ across acquirers with different levels of financial constraints. The retention of top-tier advisors creates value for relatively constrained acquirers in both the short and long term.

Acquirers choose appropriate investment bankers to conduct M&A deals. Correspondingly, financial advisors also have rights and opportunities to determine whether they accept the offers. Since top-tier advisors tend to be in high demand, there is concern that top-tier advisors select their acquirer clients to maintain their reputation. In other words, it is possible that top-tier advisors cherry-pick acquirer clients with given characteristics to generate excess returns. However, empirical

evidence suggests this concern is not necessary. Firstly, acquirer firm characteristics are not the only determinant to gain superior performance. To create synergy, it is essential to choose appropriate targets. Golubov et al. (2012) have highlighted the top-tier advisors' abilities to identify synergistic targets and to secure more shares of synergy for their clients. Secondly, our results suggest that financial constraint is not a significant determinant for acquirer performance, when firm, deal, and market characteristics are controlled for. If top-tier advisors cherry-pick acquirer clients to gain superior performance and maintain their reputation, it cannot explain the fact that top-tier advisors improve performance for constrained acquirers, but not for unconstrained acquirers.

In addition, the results for deal completion rate, bid premiums, and acquirer relative advisory fees can help explain the variation in acquirer performance. In general, deal completion is independent of bank reputation. Top-tier advisors should have stronger ability to complete deals. It is possible that top-tier advisors emphasize on deal quality, and deter value-destroying deals for their clients. However, for deals with investment bank involvement, constrained acquirers advised by top-tier advisors have lowest deal completion rate, whereas unconstrained acquirers with top-tier advisors have the highest completion rate. Furthermore, constrained acquirers advised by top-tier advisors also pay lowest bid premiums and relative advisory fees. In contrast, unconstrained acquirers advised by top-tier advisors pay higher advisory fees. If unconstrained acquirers chase performance, they should expect to gain higher bargaining power and therefore pay lower bid premiums. However, the highest advisory fees do not translate into greater bargaining power in the negotiation process. Unconstrained acquirers advised by top-tier advisors pay higher bid premiums. These results suggest that unconstrained acquirers care less about overpayment and takeover performance, and give priority to deal completion.

Overall, our results suggest that different acquirers have different aims. Constrained acquirers retain top-tier advisors to gain superior performance, while unconstrained acquirers retain top-tier advisors to complete their intended deals.

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## Table 1: Summary Statistics

This table presents summary statistics for the full sample of M&A Deals, stratified by the retention of financial advisors. The top-tier, non-top-tier and in-house subsamples contain deals advised by top-tier advisors, deals advised by non-top-tier advisors and in-house deals, respectively. Panels A, B, C and D reports acquirer short- and long-term abnormal returns, acquirer firm characteristics, deal characteristics, and market characteristics, respectively. All variables are defined in Section 3.2 and Appendix B. Bid Premiums are winsorized if values are beyond the range of [0, 2]. Other quantitative variables are winsorized at the 1% and 99% levels. T-test and the Wilcoxon rank-sum test are used to test the difference in mean and median, respectively.

| | All (A) | | | Top-Tier (T) | | | Non-Top-Tier (N) | | | In-House (I) | | | Difference (T) – (N) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | N | Mean | Median | N | Mean | Median | N | Mean | Median | N | P-Value Mean | P-Value Median |
| **Panel A: Acquirer Short- and Long-Term Abnormal Returns** | | | | | | | | | | | | | | |
| **CAR [-2, 2]** | 1.08% | 0.10 | 3,420 | 0.57% | 0.48% | 1647 | 1.51% | 0.99% | 1676 | 2.42% | 0.68% | 97 | 0.003 | 0.019 |
| **BHAR36** | -37.25% | 0.84 | 3,216 | -29.68% | -35.69% | 1572 | -44.86% | -54.79% | 1551 | -38.46% | -45.98% | 93 | 0.000 | 0.000 |
| **Panel B: Acquirer Firm Characteristics** | | | | | | | | | | | | | | |
| **KZ Index** | -14.61 | 52.37 | 3,420 | -11.67 | -2.25 | 1647 | -18.12 | -2.75 | 1676 | -3.83 | -1.28 | 97 | 0.000 | 0.010 |
| **MV ($ mil)** | 8239.88 | 23159.14 | 3,420 | 12944.36 | 2496.40 | 1647 | 2425.14 | 388.54 | 1676 | 28829.64 | 1602.12 | 97 | 0.000 | 0.000 |
| **M/B** | 4.84 | 6.80 | 3,420 | 4.86 | 3.02 | 1647 | 4.64 | 2.76 | 1676 | 7.97 | 5.00 | 97 | 0.181 | 0.004 |
| **Leverage** | 0.28 | 0.26 | 3,420 | 0.31 | 0.30 | 1647 | 0.24 | 0.15 | 1676 | 0.25 | 0.24 | 97 | 0.000 | 0.000 |
| **Cash Flows/Equity** | 0.04 | 0.13 | 3,420 | 0.06 | 0.06 | 1647 | 0.03 | 0.05 | 1676 | 0.04 | 0.05 | 97 | 0.000 | 0.000 |
| **RUNUP** | 0.17 | 0.49 | 3,420 | 0.15 | 0.10 | 1647 | 0.20 | 0.11 | 1676 | 0.15 | 0.12 | 97 | 0.005 | 0.093 |
| **Sigma** | 0.03 | 0.02 | 3,420 | 0.03 | 0.02 | 1647 | 0.04 | 0.03 | 1676 | 0.03 | 0.03 | 97 | 0.000 | 0.000 |
| **Past Experience** | 6.94 | 8.53 | 3,420 | 8.57 | 6.00 | 1647 | 4.90 | 3.00 | 1676 | 14.67 | 8.00 | 97 | 0.000 | 0.000 |
| **Serial Bidder** | 28.74% | 0.45 | 3,420 | 37.40% | – | 1647 | 18.79% | – | 1676 | 53.61% | – | 97 | 0.000 | – |



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| | All (A) | | | Top-Tier (T) | | | Non-Top-Tier (N) | | | In-House (I) | | | Difference (T) – (N) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | N | Mean | Median | N | Mean | Median | N | Mean | Median | N | P-Value Mean | P-Value Median |
| **Panel C: Deal Characteristics** | | | | | | | | | | | | | | |
| **Transaction Value ($ mil.)** | 728.25 | 1823.83 | 3,420 | 1207.49 | 365.35 | 1647 | 275.16 | 69.69 | 1676 | 419.63 | 101.13 | 97 | 0.000 | 0.000 |
| **Relative Size** | 0.34 | 0.45 | 3,420 | 0.33 | 0.17 | 1647 | 0.36 | 0.19 | 1676 | 0.10 | 0.05 | 97 | 0.037 | 0.001 |
| **Public** | 46.20% | 0.50 | 3,420 | 53.79% | – | 1647 | 36.63% | – | 1676 | 82.47% | – | 97 | 0.000 | – |
| **All Stock Deals** | 25.50% | 0.44 | 3,420 | 20.40% | – | 1647 | 29.18% | – | 1676 | 48.45% | – | 97 | 0.000 | – |
| **All Cash Deals** | 37.08% | 0.48 | 3,420 | 42.38% | – | 1647 | 32.10% | – | 1676 | 32.99% | – | 97 | 0.000 | – |
| **Mix Deals** | 37.43% | 0.48 | 3,420 | 37.22% | – | 1647 | 38.72% | – | 1676 | 18.56% | – | 97 | 0.186 | – |
| **Hostile** | 2.63% | 0.16 | 3,420 | 3.89% | – | 1647 | 1.55% | – | 1676 | 0.00% | – | 97 | 0.000 | – |
| **Competing Bid** | 3.19% | 0.18 | 3,420 | 4.31% | – | 1647 | 2.15% | – | 1676 | 2.06% | – | 97 | 0.000 | – |
| **Tender Offer** | 16.20% | 0.37 | 3,420 | 19.73% | – | 1647 | 12.47% | – | 1676 | 20.62% | – | 97 | 0.000 | – |
| **Diversification** | 34.82% | 0.48 | 3,420 | 34.43% | – | 1647 | 34.90% | – | 1676 | 40.21% | – | 97 | 0.386 | – |
| **Completed Deals** | 92.98% | 0.26 | 3,420 | 92.53% | – | 1647 | 93.38% | – | 1676 | 93.81% | – | 97 | 0.171 | – |
| **Time to Resolution** | 86.02 | 78.92 | 3,386 | 95.23 | 73.00 | 1635 | 75.51 | 54.00 | 1658 | 111.39 | 98.00 | 93 | 0.000 | 0.000 |
| **Bid Premiums** | 42.61% | 0.38 | 1,456 | 40.62% | 33.33% | 839 | 43.84% | 35.04% | 546 | 56.76% | 45.45% | 71 | 0.061 | 0.295 |
| **Advisory Fees ($ mil)** | 3.89 | 6.45 | 537 | 6.21 | 3.23 | 256 | 1.77 | 0.75 | 281 | – | – | – | 0.000 | 0.000 |
| **Relative Advisory Fees** | 0.85% | 0.85% | 537 | 0.69% | 0.51% | 256 | 0.99% | 0.75% | 281 | – | – | – | 0.000 | 0.000 |
| **Panel D: Market Characteristics** | | | | | | | | | | | | | | |
| **Heat Degree** | 1.45 | 0.34 | 3,420 | 1.40 | 1.36 | 1647 | 1.47 | 1.44 | 1676 | 1.82 | 1.85 | 97 | 0.000 | 0.000 |
| **High Valuation Market** | 44.06% | 0.50 | 3,420 | 39.28% | – | 1647 | 46.00% | – | 1676 | 91.75% | – | 97 | 0.000 | – |
| **Neutral Valuation Market** | 38.77% | 0.49 | 3,420 | 41.23% | – | 1647 | 38.37% | – | 1676 | 4.12% | – | 97 | 0.046 | – |
| **Low Valuation Market** | 17.16% | 0.38 | 3,420 | 19.49% | – | 1647 | 15.63% | – | 1676 | 4.12% | – | 97 | 0.002 | – |



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**Table 2: Correlation Matrix**

This table presents pairwise correlations of the variables. Variables are abbreviated as follows: CAR – CAR [-2, 2]; BHAR – BHAR36; Top – Top-Tier Advisor; KZ – KZ Index; MV – Market Value; MB – M/B; LEV – Leverage; CFE – Cash Flows/Equity; RUN – RUNUP; SIG – Sigma; PE – Past Experience; SB – Serial Bidder; RS – Relative Size; PUB – Public; STO – Stock; CAS – Cash; HOS – Hostile; CB – Competing Bid; TO – Tender Offer; DIV – Diversification; HD – Heat Degree; HVM – High Valuation Market; LVM – Low Valuation Market. All variables are defined in Section 3.2 and Appendix B. Bid Premiums are winsorized if values are beyond the range of [0, 2]. Other quantitative variables are winsorized at the 1% and 99% levels.

| | CAR | BHAR | TOP | KZ | MV | MB | LEV | CFE | RUN | SIG | PE | SB | RS | PUB | STO | CAS | HOS | CB | TO | DIV | HD | HVM | LVM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAR | 1.00 | | | | | | | | | | | | | | | | | | | | | | |
| BHAR | -0.01 | 1.00 | | | | | | | | | | | | | | | | | | | | | |
| TOP | -0.05 | 0.09 | 1.00 | | | | | | | | | | | | | | | | | | | | |
| KZ | 0.01 | 0.06 | 0.05 | 1.00 | | | | | | | | | | | | | | | | | | | |
| MV | -0.07 | 0.01 | 0.19 | 0.04 | 1.00 | | | | | | | | | | | | | | | | | | |
| MB | -0.03 | -0.16 | 0.00 | -0.18 | 0.18 | 1.00 | | | | | | | | | | | | | | | | | |
| LEV | 0.05 | 0.09 | 0.13 | 0.19 | 0.03 | -0.06 | 1.00 | | | | | | | | | | | | | | | | |
| CFE | 0.07 | 0.11 | 0.11 | 0.20 | 0.03 | -0.11 | 0.16 | 1.00 | | | | | | | | | | | | | | | |
| RUN | -0.02 | -0.13 | -0.04 | -0.07 | 0.01 | 0.46 | -0.08 | -0.04 | 1.00 | | | | | | | | | | | | | | |
| SIG | 0.00 | -0.15 | -0.28 | -0.29 | -0.22 | 0.24 | -0.19 | -0.35 | 0.32 | 1.00 | | | | | | | | | | | | | |
| PE | -0.07 | 0.03 | 0.18 | 0.11 | 0.56 | 0.01 | 0.13 | 0.07 | -0.06 | -0.25 | 1.00 | | | | | | | | | | | | |
| SB | -0.05 | 0.03 | 0.18 | 0.11 | 0.33 | -0.02 | 0.11 | 0.08 | -0.08 | -0.27 | 0.67 | 1.00 | | | | | | | | | | | |
| RS | 0.07 | 0.08 | -0.02 | 0.04 | -0.18 | -0.14 | 0.19 | 0.05 | -0.06 | 0.11 | -0.15 | -0.15 | 1.00 | | | | | | | | | | |
| PUB | -0.14 | 0.03 | 0.14 | 0.07 | 0.17 | -0.02 | 0.06 | 0.02 | -0.04 | -0.13 | 0.17 | 0.14 | 0.08 | 1.00 | | | | | | | | | |
| STO | -0.09 | -0.14 | -0.12 | -0.09 | 0.00 | 0.27 | -0.13 | -0.18 | 0.22 | 0.32 | -0.02 | -0.04 | -0.05 | 0.14 | 1.00 | | | | | | | | |
| CAS | 0.09 | 0.10 | 0.10 | 0.07 | 0.08 | -0.15 | 0.03 | 0.15 | -0.16 | -0.30 | 0.12 | 0.13 | -0.18 | 0.02 | -0.44 | 1.00 | | | | | | | |
| HOS | -0.06 | 0.04 | 0.08 | 0.03 | 0.03 | -0.02 | 0.07 | 0.05 | -0.01 | -0.06 | 0.07 | 0.05 | 0.12 | 0.16 | -0.05 | 0.01 | 1.00 | | | | | | |
| CB | -0.07 | 0.02 | 0.06 | 0.01 | 0.03 | -0.02 | 0.04 | 0.04 | -0.03 | -0.06 | 0.02 | 0.04 | 0.12 | 0.16 | -0.04 | 0.00 | 0.31 | 1.00 | | | | | |
| TO | 0.05 | 0.05 | 0.10 | 0.06 | 0.05 | -0.10 | 0.04 | 0.08 | -0.11 | -0.14 | 0.09 | 0.09 | -0.04 | 0.46 | -0.20 | 0.33 | 0.16 | 0.14 | 1.00 | | | | |
| DIV | -0.03 | -0.04 | -0.01 | -0.01 | 0.10 | 0.01 | 0.03 | 0.02 | 0.00 | -0.06 | 0.10 | 0.07 | -0.09 | -0.06 | 0.01 | -0.01 | 0.00 | -0.04 | -0.06 | 1.00 | | | |
| HD | 0.02 | -0.09 | -0.12 | -0.01 | -0.03 | 0.14 | 0.04 | 0.05 | 0.01 | 0.07 | 0.04 | 0.03 | 0.06 | 0.10 | 0.25 | -0.17 | 0.01 | 0.02 | 0.05 | 0.04 | 1.00 | | |
| HVM | 0.03 | -0.10 | -0.09 | -0.05 | 0.00 | 0.17 | 0.01 | 0.02 | 0.11 | 0.22 | 0.04 | 0.02 | 0.04 | 0.04 | 0.23 | -0.17 | -0.01 | 0.00 | 0.02 | 0.04 | 0.60 | 1.00 | |
| LVM | -0.03 | 0.09 | 0.06 | 0.02 | 0.03 | -0.09 | 0.05 | 0.01 | -0.10 | -0.19 | 0.01 | 0.02 | -0.04 | -0.03 | -0.13 | 0.12 | 0.01 | -0.02 | -0.01 | -0.01 | -0.29 | -0.40 | 1.00 |



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## Table 3: Acquirer Short-Term Performance

This table reports acquirer short-term 5-day market-adjusted cumulative abnormal returns around the announcement for the sample of deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (CAR [-2, 2]) is winsorized at the 1% and 99% levels. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

| | All (A) | Constrained (C) | Neutral (N) | Unconstrained (U) | Difference (C) – (U) |
|---|---|---|---|---|---|
| **Panel A: All** | | | | | |
| **Mean** | 1.04%*** | 1.90%*** | 0.84%*** | 0.41% | 1.49%*** |
| | (0.000) | (0.000) | (0.002) | (0.204) | (0.000) |
| **Median** | 0.64%*** | 1.42%*** | 0.49%*** | 0.26% | 1.16%*** |
| | (0.000) | (0.000) | (0.007) | (0.303) | (0.000) |
| **N** | 3,323 | 1,098 | 1,108 | 1,117 | |
| **Panel B: Top-Tier** | | | | | |
| **Mean** | 0.57%*** | 2.31%*** | 0.18% | -0.88%** | 3.19%*** |
| | (0.008) | (0.000) | (0.549) | (0.042) | (0.000) |
| **Median** | 0.48%*** | 1.82%*** | 0.21% | -0.24%** | 2.06%*** |
| | (0.003) | (0.000) | (0.529) | (0.049) | (0.000) |
| **N** | 1,647 | 545 | 603 | 499 | |
| **Panel C: Non-Top-Tier** | | | | | |
| **Mean** | 1.51%*** | 1.49%*** | 1.61%*** | 1.45%*** | 0.04% |
| | (0.000) | (0.001) | (0.000) | (0.002) | (0.474) |
| **Median** | 0.99%*** | 1.28%*** | 0.91%*** | 0.69%*** | 0.59% |
| | (0.000) | (0.001) | (0.002) | (0.003) | (0.830) |
| **N** | 1,676 | 553 | 505 | 618 | |
| **Panel D: Difference (Panel B – Panel C)** | | | | | |
| **Mean** | -0.94%*** | 0.83%* | -1.43%*** | -2.33%*** | |
| | (0.003) | (0.073) | (0.004) | (0.000) | |
| **Median** | -0.51%** | 0.54% | -0.70%** | -0.93%*** | |
| | (0.019) | (0.125) | (0.029) | (0.000) | |

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## Table 4: Acquirer Long-Term Performance

This table reports the acquirer long-term 36-month size-adjusted buy-and-hold abnormal returns from the announcement for the sample of completed deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (BHAR36) is winsorized at the 1% and 99% levels. The bootstrapped skewness-adjusted t-statistic is used to test the significance of the mean. T-test is used to test the significance of the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

| | All (A) | Constrained (C) | Neutral (N) | Unconstrained (U) | Difference (C) - (U) |
|---|---|---|---|---|---|
| **Panel A: All** | | | | | |
| **Mean** | -37.19%*** | -29.97%*** | -38.82%*** | -42.41%*** | 12.44%*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) |
| **Median** | -44.97%*** | -39.85%*** | -42.44%*** | -53.05%*** | 13.20%*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| **N** | 2,920 | 940 | 983 | 997 | |
| **Panel B: Top-Tier** | | | | | |
| **Mean** | -29.35%*** | -16.69%*** | -36.31%*** | -33.82%*** | 17.12%*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) |
| **Median** | -35.69%*** | -29.65%*** | -34.75%*** | -45.84%*** | 16.19%*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) |
| **N** | 1,464 | 461 | 543 | 460 | |
| **Panel C: Non-Top-Tier** | | | | | |
| **Mean** | -45.08%*** | -42.75%*** | -41.91%*** | -49.77%*** | 7.02% |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.106) |
| **Median** | -55.00%*** | -55.29%*** | -49.42%*** | -60.19%*** | 4.91%* |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.064) |
| **N** | 1,456 | 479 | 440 | 537 | |
| **Panel D: Difference (Panel B – Panel C)** | | | | | |
| **Mean** | 15.73%*** | 26.05%*** | 5.60% | 15.95%*** | |
| | (0.000) | (0.000) | (0.127) | (0.002) | |
| **Median** | 19.31%*** | 25.63%*** | 14.67%*** | 14.35%*** | |
| | (0.000) | (0.000) | (0.006) | (0.000) | |

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## Table 5: Deal Completion Rate

This table reports the deal completion rate for the sample of deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to difference in deal completion rate between deals advised by top-tier and non-top-tier advisors. T-test is used to test the significance of the mean, and the difference in the means. P-Values are shown in parentheses. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

| | All (A) | Constrained (C) | Neutral (N) | Unconstrained (U) | Difference (C) - (U) |
|---|---|---|---|---|---|
| | | | **Panel A: All** | | |
| **Mean** | 92.96% | 90.35% | 93.32% | 95.17% | -4.82%*** |
| | | | | | (0.000) |
| **N** | 3,323 | 1,098 | 1,108 | 1,117 | |
| | | | **Panel B: Top-Tier** | | |
| **Mean** | 92.53% | 90.09% | 92.54% | 95.19% | -5.10%*** |
| | | | | | (0.001) |
| **N** | 1,647 | 545 | 603 | 499 | |
| | | | **Panel C: Non-Top-Tier** | | |
| **Mean** | 93.38% | 90.60% | 94.26% | 95.15% | -4.55%*** |
| | | | | | (0.001) |
| **N** | 1,676 | 553 | 505 | 618 | |
| | | | **Panel D: Difference (Panel B – Panel C)** | | |
| **Mean** | -0.85% | -0.51% | -1.72% | 0.04% | |
| | (0.171) | (0.389) | (0.124) | (0.486) | |

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## Table 6: Time to Resolution

This table reports time to resolution for the sample of deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to difference in time to resolution between deals advised by top-tier and non-top-tier advisors. The variable (Time to Resolution) is winsorized at the 1% and 99% levels. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

| | All (A) | Constrained (C) | Neutral (N) | Unconstrained (U) | Difference (C) - (U) |
|---|---|---|---|---|---|
| | | | **Panel A: All** | | |
| **Mean** | 85.30 | 101.05 | 85.30 | 69.87 | 31.17*** (0.000) |
| **Median** | 64.00 | 79.00 | 63.00 | 50.50 | 28.50*** (0.000) |
| **N** | 3,293 | 1,084 | 1,103 | 1,106 | |
| | | | **Panel B: Top-Tier** | | |
| **Mean** | 95.23 | 108.08 | 95.95 | 80.43 | 27.65*** (0.000) |
| **Median** | 73.00 | 83.00 | 73.00 | 63.00 | 20.00*** (0.000) |
| **N** | 1,635 | 538 | 601 | 496 | |
| | | | **Panel C: Non-Top-Tier** | | |
| **Mean** | 75.51 | 94.12 | 72.55 | 61.29 | 32.83*** (0.000) |
| **Median** | 54.00 | 73.00 | 49.00 | 42.00 | 31.00*** (0.000) |
| **N** | 1,658 | 546 | 502 | 610 | |
| | | | **Panel D: Difference (Panel B – Panel C)** | | |
| **Mean** | 19.72*** (0.000) | 13.96*** (0.003) | 23.40*** (0.000) | 19.14*** (0.000) | |
| **Median** | 19.00*** (0.000) | 10.00*** (0.003) | 24.00*** (0.000) | 21.00*** (0.000) | |

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## Table 7: Bid Premium

This table reports the bid premium for the sample of public deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to difference in bid premium between deals advised by top-tier and non-top-tier advisors. The variable (Bid Premium) is winsorized if values are beyond the range of [0, 2]. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

| | All (A) | Constrained (C) | Neutral (N) | Unconstrained (U) | Difference (C) - (U) |
|---|---|---|---|---|---|
| | | | **Panel A: All** | | |
| **Mean** | 41.89% | 39.65% | 41.39% | 45.44% | -5.78%** |
| | | | | | (0.012) |
| **Median** | 33.93% | 33.37% | 32.92% | 36.73% | -3.36%* |
| | | | | | (0.071) |
| **N** | 1,385 | 499 | 501 | 385 | |
| | | | **Panel B: Top-Tier** | | |
| **Mean** | 40.62% | 38.21% | 38.46% | 46.58% | -8.37%*** |
| | | | | | (0.005) |
| **Median** | 33.33% | 32.40% | 31.29% | 38.10% | -5.70%** |
| | | | | | (0.018) |
| **N** | 839 | 283 | 324 | 232 | |
| | | | **Panel C: Non-Top-Tier** | | |
| **Mean** | 43.84% | 41.54% | 46.76% | 43.71% | -2.17% |
| | | | | | (0.299) |
| **Median** | 35.05% | 35.28% | 35.42% | 34.45% | 0.83% |
| | | | | | (0.961) |
| **N** | 546 | 216 | 177 | 153 | |
| | | | **Panel D: Difference (Panel B – Panel C)** | | |
| **Mean** | -3.22%* | -3.33% | -8.31%** | 2.87% | |
| | (0.061) | (0.141) | (0.012) | (0.249) | |
| **Median** | -1.72% | -2.88% | -4.13%* | 3.65% | |
| | (0.295) | (0.359) | (0.065) | (0.282) | |

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## Table 8: Acquirer Relative Advisory Fees

This table reports the acquirer relative advisory fees for the sample of deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to difference in acquirer relative advisory fees between deals advised by top-tier and non-top-tier advisors. The variable (Acquirer Relative Advisory Fees) is winsorized at the 1% and 99% levels. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

| | All (A) | Constrained (C) | Neutral (N) | Unconstrained (U) | Difference (C) - (U) |
|---|---|---|---|---|---|
| | | | **Panel A: All** | | |
| **Mean** | 0.85% | 0.77% | 0.90% | 0.91% | -0.14%* |
| | | | | | (0.068) |
| **Median** | 0.61% | 0.53% | 0.69% | 0.64% | -0.11%** |
| | | | | | (0.031) |
| **N** | 537 | 224 | 180 | 133 | |
| | | | **Panel B: Top-Tier** | | |
| **Mean** | 0.69% | 0.62% | 0.72% | 0.77% | -0.15%* |
| | | | | | (0.089) |
| **Median** | 0.51% | 0.43% | 0.56% | 0.54% | -0.12% |
| | | | | | (0.109) |
| **N** | 256 | 104 | 95 | 57 | |
| | | | **Panel C: Non-Top-Tier** | | |
| **Mean** | 0.99% | 0.89% | 1.09% | 1.01% | -0.12% |
| | | | | | (0.205) |
| **Median** | 0.75% | 0.63% | 0.87% | 0.70% | -0.06% |
| | | | | | (0.221) |
| **N** | 281 | 120 | 85 | 76 | |
| | | | **Panel D: Difference (Panel B – Panel C)** | | |
| **Mean** | -0.30%*** | -0.28%*** | -0.37%*** | -0.24%* | |
| | (0.000) | (0.006) | (0.002) | (0.051) | |
| **Median** | -0.23%*** | -0.21%** | -0.31%*** | -0.15% | |
| | (0.000) | (0.028) | (0.001) | (0.187) | |

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## Table 9: Regression of Short-Term Performance

This table presents results of the OLS regression of short-term performance for the sample of deals advised by investment banks. In these models acquirer CAR [-2, 2] are regressed against a vector of explanatory variables. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Specifications 1 and 2 report the results for all acquirers. Specifications 3, 4 and 5 report the results for constrained, neutral and unconstrained acquirers, respectively. All variables are defined in Section 3.2 and Appendix B. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. All quantitative variables are winsorized at the 1% and 99% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

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| | (1) All | (2) All | (3) Constrained | (4) Neutral | (5) Unconstrained |
|---|---|---|---|---|---|
| TopTier | 0.0004 | -0.0033 | 0.0145** | -0.0043 | -0.0125 |
| | (0.910) | (0.565) | (0.024) | (0.464) | (0.118) |
| TopTier×Constrained | | 0.0180** | | | |
| | | (0.022) | | | |
| TopTier×Unconstrained | | -0.0077 | | | |
| | | (0.369) | | | |
| Constrained | | -0.0061 | | | |
| | | (0.325) | | | |
| Unconstrained | | 0.0032 | | | |
| | | (0.637) | | | |
| Ln(MV) | -0.0054*** | -0.0051*** | -0.0092*** | -0.0035 | -0.0048 |
| | (0.000) | (0.001) | (0.000) | (0.131) | (0.108) |
| M/B | 0.0004 | 0.0004 | -0.0004 | 0.0002 | 0.0011 |
| | (0.385) | (0.314) | (0.479) | (0.829) | (0.173) |
| Leverage | 0.0050 | 0.0039 | 0.0067 | -0.0046 | 0.0050 |
| | (0.495) | (0.619) | (0.576) | (0.735) | (0.753) |
| Cash Flows/Equity | 0.0411** | 0.0390** | 0.0536** | 0.0043 | 0.0305 |
| | (0.013) | (0.019) | (0.015) | (0.934) | (0.301) |
| RUNUP | 0.0015 | 0.0014 | 0.0015 | 0.0060 | -0.0062 |
| | (0.755) | (0.762) | (0.849) | (0.528) | (0.447) |
| Sigma | 0.0301 | 0.0303 | -0.2624 | -0.0720 | 0.0520 |
| | (0.870) | (0.869) | (0.356) | (0.856) | (0.873) |
| Past Experience | -0.0000 | 0.0000 | -0.0002 | -0.0003 | 0.0006 |
| | (0.962) | (0.989) | (0.807) | (0.406) | (0.282) |
| Serial Bidder | 0.0015 | 0.0017 | 0.0018 | -0.0003 | 0.0031 |
| | (0.755) | (0.732) | (0.849) | (0.969) | (0.727) |
| Relative Size | 0.0110* | 0.0112* | 0.0094 | 0.0051 | 0.0180 |
| | (0.055) | (0.052) | (0.222) | (0.647) | (0.180) |
| Public | -0.0322*** | -0.0322*** | -0.0234*** | -0.0306*** | -0.0424*** |
| | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) |
| Cash | 0.0155*** | 0.0155*** | 0.0166*** | 0.0133** | 0.0156** |
| | (0.000) | (0.000) | (0.008) | (0.042) | (0.040) |
| Stock | -0.0031 | -0.0028 | -0.0059 | 0.0071 | -0.0092 |
| | (0.553) | (0.591) | (0.516) | (0.399) | (0.355) |
| Hostile | -0.0211** | -0.0232*** | -0.0225* | -0.0176 | -0.0187 |
| | (0.015) | (0.008) | (0.089) | (0.234) | (0.209) |
| Competing Bid | -0.0293*** | -0.0291*** | -0.0419*** | -0.0248** | -0.0036 |
| | (0.001) | (0.001) | (0.005) | (0.026) | (0.802) |
| Tender Offer | 0.0299*** | 0.0303*** | 0.0220*** | 0.0333*** | 0.0378*** |
| | (0.000) | (0.000) | (0.006) | (0.000) | (0.000) |
| Diversification | -0.0070* | -0.0063* | -0.0126* | -0.0023 | -0.0062 |
| | (0.056) | (0.084) | (0.069) | (0.662) | (0.395) |
| M&A Heat Degree | -0.0317 | -0.0299 | -0.0760 | 0.0181 | -0.0392 |
| | (0.349) | (0.375) | (0.203) | (0.749) | (0.532) |
| High Valuation Market | -0.0001 | -0.0003 | 0.0136 | -0.0113 | -0.0061 |
| | (0.988) | (0.971) | (0.322) | (0.291) | (0.712) |
| Low Valuation Market | -0.0113** | -0.0111** | -0.0173* | -0.0064 | -0.0089 |
| | (0.043) | (0.047) | (0.087) | (0.478) | (0.392) |
| Constant | 0.0840** | 0.0803** | 0.1953*** | 0.0429 | 0.0581 |
| | (0.028) | (0.037) | (0.005) | (0.500) | (0.404) |
| N | 3323 | 3323 | 1098 | 1108 | 1117 |
| $R^2$ | 0.087 | 0.090 | 0.144 | 0.087 | 0.097 |
| adj. $R^2$ | 0.072 | 0.074 | 0.101 | 0.042 | 0.053 |

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## Table 10: Regression of Long-Term Performance

This table presents results of the OLS regression of long-term performance for the sample of completed deals advised by investment banks. In these models acquirer BHAR36 are regressed against a vector of explanatory variables. Acquirers are divided into three groups based on KZ index. Specifically, the lowest (highest) third of acquirers ranked by their KZ index are defined as unconstrained (constrained) acquirers. The middle third of acquirers are classified as neutral acquirers. Specifications 1 and 2 report the results for all acquirers. Specifications 3, 4 and 5 report the results for constrained, neutral and unconstrained acquirers, respectively. All variables are defined in Section 3.2 and Appendix B. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. All quantitative variables are winsorized at the 1% and 99% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

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| | (1) All | (2) All | (3) Constrained | (4) Neutral | (5) Unconstrained |
|---|---|---|---|---|---|
| TopTier | 0.1285*** | 0.0550 | 0.2427*** | 0.0476 | 0.0856 |
| | (0.002) | (0.327) | (0.001) | (0.413) | (0.258) |
| TopTier×Constrained | | 0.1434* | | | |
| | | (0.068) | | | |
| TopTier×Unconstrained | | 0.0773 | | | |
| | | (0.390) | | | |
| Constrained | | -0.0385 | | | |
| | | (0.516) | | | |
| Unconstrained | | -0.0075 | | | |
| | | (0.907) | | | |
| Ln(MV) | -0.0422*** | -0.0410** | -0.0730** | -0.0387 | -0.0138 |
| | (0.009) | (0.011) | (0.024) | (0.109) | (0.650) |
| M/B | -0.0089** | -0.0089** | -0.0134** | -0.0131*** | -0.0023 |
| | (0.011) | (0.011) | (0.012) | (0.008) | (0.690) |
| Leverage | 0.1359* | 0.1314 | 0.2677** | 0.0239 | 0.1452 |
| | (0.097) | (0.119) | (0.050) | (0.860) | (0.310) |
| Cash Flows/Equity | 0.3955** | 0.3828** | 0.2071 | 1.0459** | 0.1198 |
| | (0.018) | (0.023) | (0.367) | (0.017) | (0.712) |
| RUNUP | -0.0799* | -0.0799* | -0.1492* | -0.1410* | 0.0269 |
| | (0.090) | (0.093) | (0.069) | (0.074) | (0.762) |
| Sigma | -3.2933* | -3.3351* | -4.5580 | -3.9383 | -0.2789 |
| | (0.087) | (0.083) | (0.176) | (0.223) | (0.945) |
| Past Experience | 0.0048 | 0.0049 | 0.0011 | 0.0034 | 0.0067 |
| | (0.145) | (0.140) | (0.846) | (0.390) | (0.334) |
| Serial Bidder | -0.0168 | -0.0128 | -0.0891 | 0.0112 | 0.0877 |
| | (0.752) | (0.808) | (0.295) | (0.874) | (0.405) |
| Relative Size | 0.0716 | 0.0698 | -0.0512 | 0.0234 | 0.4169*** |
| | (0.170) | (0.181) | (0.508) | (0.788) | (0.001) |
| Public | 0.0063 | 0.0074 | 0.0923 | -0.0653 | -0.0514 |
| | (0.871) | (0.850) | (0.205) | (0.259) | (0.454) |
| Cash | 0.0551 | 0.0543 | 0.0430 | -0.0434 | 0.1827*** |
| | (0.124) | (0.132) | (0.533) | (0.436) | (0.004) |
| Stock | -0.0512 | -0.0527 | -0.0763 | -0.0763 | -0.0497 |
| | (0.336) | (0.322) | (0.387) | (0.319) | (0.648) |
| Hostile | 0.3791** | 0.3680** | 0.3799* | 0.1494 | 0.4690 |
| | (0.031) | (0.034) | (0.081) | (0.618) | (0.298) |
| Competing Bid | -0.0585 | -0.0538 | -0.0710 | -0.0144 | 0.0256 |
| | (0.587) | (0.621) | (0.746) | (0.932) | (0.904) |
| Tender Offer | 0.0139 | 0.0145 | 0.0410 | 0.0095 | 0.0111 |
| | (0.783) | (0.774) | (0.661) | (0.901) | (0.908) |
| Diversification | -0.0510 | -0.0459 | 0.0086 | -0.0279 | -0.0751 |
| | (0.165) | (0.214) | (0.902) | (0.585) | (0.219) |
| M&A Heat Degree | 0.0414 | 0.0506 | -0.2902 | 0.0558 | 0.1705 |
| | (0.889) | (0.865) | (0.602) | (0.917) | (0.732) |
| High Valuation Market | -0.0388 | -0.0358 | 0.0491 | -0.0451 | -0.1333 |
| | (0.561) | (0.590) | (0.663) | (0.660) | (0.340) |
| Low Valuation Market | 0.0534 | 0.0547 | 0.0835 | 0.0362 | 0.0459 |
| | (0.313) | (0.301) | (0.478) | (0.666) | (0.533) |
| Constant | -0.1033 | -0.1025 | 0.5316 | -0.0316 | -0.7544 |
| | (0.772) | (0.775) | (0.478) | (0.960) | (0.144) |
| N | 2920 | 2920 | 940 | 983 | 997 |
| $R^2$ | 0.091 | 0.093 | 0.146 | 0.139 | 0.133 |
| adj. $R^2$ | 0.074 | 0.074 | 0.095 | 0.090 | 0.086 |

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## Appendix 1: Top 25 U.S. Financial Advisor Ranking Based on Transaction Value

The table presents the ranking of the top-25 investment banker based on the transaction value for acquisitions of U.S. targets over the period January 1990 to December 31, 2012 obtained from the Thomson One Banker. Transaction value is shown in U.S. million dollars.

| Rank | Financial Advisor | Deal Value ($ Mil) | Market Share[17] | Number of Deals |
|---|---|---|---|---|
| | **Top-Tier** | | | |
| 1 | Goldman Sachs & Co | 7,703,438.25 | 36.7 | 4,172 |
| 2 | Morgan Stanley | 5,939,139.94 | 28.3 | 3,328 |
| 3 | Bank of America Merrill Lynch | 5,606,400.70 | 26.7 | 4,967 |
| 4 | JP Morgan | 5,548,980.32 | 26.4 | 4,278 |
| 5 | Citi/Salomon Smith Barney/Salomon Brothers | 4,549,572.86 | 21.6 | 3,782 |
| 6 | Credit Suisse/First Boston | 4,178,196.93 | 19.9 | 4,454 |
| 7 | Barclays/Lehman Brothers | 3,509,500.37 | 16.7 | 2,418 |
| 8 | UBS | 2,266,358.97 | 10.8 | 2,424 |
| 9 | Lazard | 2,170,142.34 | 10.3 | 1,887 |
| 10 | Deutsche Bank | 1,697,296.66 | 8.1 | 1,927 |
| | **Non-Top-Tier** | | | |
| 11 | Evercore Partners | 1,072,961.26 | 5.1 | 363 |
| 12 | Commerzbank AG | 595,289.46 | 2.8 | 503 |
| 13 | Houlihan Lokey | 579,540.88 | 2.8 | 2,289 |
| 14 | PJT Partners LP | 531,198.92 | 2.5 | 404 |
| 15 | Wells Fargo & Co | 530,559.69 | 2.5 | 935 |
| 16 | Rothschild & Co | 478,220.18 | 2.3 | 485 |
| 17 | Greenhill & Co, LLC | 461,694.01 | 2.2 | 240 |
| 18 | Jefferies LLC | 395,867.31 | 1.9 | 1,755 |
| 19 | Stifel/KBW | 371,546.54 | 1.8 | 1,535 |
| 20 | Allen & Co Inc | 306,787.79 | 1.5 | 158 |
| 21 | Centerview Partners LLC | 286,985.04 | 1.4 | 80 |
| 22 | RBC Capital Markets | 263,252.55 | 1.3 | 1,496 |
| 23 | Moelis & Co | 252,028.19 | 1.2 | 277 |
| 24 | Gleacher & Co Inc | 243,717.81 | 1.2 | 169 |
| 25 | BNP Paribas SA | 218,766.09 | 1.0 | 78 |

[17] Sum of market share is higher than 100%, which is due to the allocation method used in Thomson One Mergers and Acquisitions database. The default allocation method is full credit to each eligible advisor, meaning if multiple advisors work on a deal, all of them will receive league table credit for the given transaction.

## Appendix 2: Definitions of Variables

This table describes variables in this paper. Panel A, B, C and D present acquirer performance, firm characteristics, deal characteristics and market characteristics, respectively.

| Variable | Definition |
|---|---|
| **Panel A: Acquirer Short- and Long-Term Abnormal Returns** | |
| **CAR [-2, 2]** | 5-day market-adjusted cumulative abnormal return around announcement |
| **BHAR36** | Post-merger 36-month size-adjusted buy-and-hold abnormal return |
| **Panel B: Acquirer Firm Characteristics** | |
| **KZ Index** | Kaplan–Zingales index |
| **MV** | Market value of equity measured 4 weeks before the announcement (CRSP item PRC×SHROUT) |
| **Ln(MV)** | The logarithm of the market value of equity measured 4 weeks before the announcement |
| **M/B** | Market-to-book ratio measured as market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ) |
| **Leverage** | Total debt over total capital at the fiscal year end before the announcement (Compustat item (DTLL+DLC)/(DLTT+DLC+SEQ)) |
| **Cash Flows/Equity** | Cash flows-to-equity ratio measured as cash flows at the fiscal year end before the announcement (Compustat item IB+DP-DVP-DVC) divided by market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT) |
| **RUNUP** | Acquirer market-adjusted CARs over the pre-announcement [-365, -28] window |
| **Sigma** | Standard deviation of a firm's market-adjusted daily abnormal returns over the pre-announcement [-365, -28] window |
| **Past Experience** | Number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question |
| **Serial Bidder** | Dummy variable equals one if the acquirer has conducted 5 or more M&A deals over the three-year period before the acquisition in question |
| **Panel C: Deal Characteristics** | |
| **Transaction Value** | Transaction value of the M&A deal (from Thomson One Banker) |
| **Relative Size** | Transaction value divided by the acquirer market value of equity 4 weeks before the announcement |
| **Public** | Dummy variable equals one if the target is a publicly listed firm. |
| **Stock** | Dummy variable equals one if the deal is 100% paid by stock. |
| **Cash** | Dummy variable equals one if the deal is 100% paid by cash. |
| **Mix** | Dummy variable equals one if the deals is |
| **Hostile** | Dummy variable equals one if the deal attitude is identified as hostile or unsolicited by Thomson One Banker. |
| **Competing Bid** | Dummy variable equals one if there are more than one bidding firms reported by Thomson One Banker. |
| **Tender Offer** | Dummy variable equals one if the deal is identified as a tender offer by Thomson One Banker. |
| **Diversification** | Dummy variable equals one if the acquirer and the target have different first two-digit of the primary SIC code. |
| **Completed Deals** | Dummy variable equals one if the deal is successfully completed. |
| **Time to Resolution** | Number of days between announcement date and resolution date (effective or withdrawn). |
| **Bid Premiums** | Difference between the offer price and the target stock price 4 weeks before the announcement divided by the latter (from Thomson One Banker) |
| **Advisory Fees** | Acquirer total advisory fees (from Thomson One Banker) |
| **Relative Advisory Fees** | Acquirer total advisory fees divided by transaction value |
| **Panel D: Market Characteristics** | |
| **M&A Heat Degree** | The moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. |
| **High Valuation Market** | Dummy equals one if a deal is conducted in high valuation month. To measure stock market valuation, this paper follows the method of Bouwman, Fuller, and |

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| | |
|---|---|
| | Nain (2009). Specifically, this paper initially detrend the monthly P/E ratios of the S&P 500 from 1985 to 2009. Subsequently, each month is classified as below or above average base on whether the detrended P/E ratio of the month is lower or higher than the past five-year average. Finally, the lowest 50% of below average months are identified as "Low Valuation Market", while the highest 50% of above average months are identified as "High Valuation Market". Other month are defined as "Neutral valuation Market". The monthly P/E ratios of the S&P 500 are acquired from Datastream. |
| **Neutral Valuation Market** | Dummy equals one if a deal is conducted in neutral valuation month. |
| **Low Valuation Market** | Dummy equals one if a deal is conducted in low valuation month. |

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